

## Residential Ordinance-Indoors

**1.0 Plumbing Fixtures:** Plumbing fixtures in all new and rehabbed construction shall not exceed the following flow rates and must be a labeled WaterSense fixture. The following flow rates shall at a minimum maintain alignment with the most current EPA WaterSense product specification standards for all fixtures listed below.

**1.0.1 Toilets.** No water closet shall have a flush volume greater than 1.6 gallons per flush.

1.0.1.1 Gravity, Pressure Assist and Electro-Hydraulic Tank-type Toilets. All gravity, pressure assist and electro-hydraulic tank type toilets shall have a maximum effective flush volume of not more than 1.28 gallons of water per flush in accordance with ASME A112.19.2/CSA B45.1 or ASME A112.19.14 and shall be listed to the EPA WaterSense Tank-Type High Efficiency Toilet Specification. Note: The effective flush volume for dual flush toilets is defined as the composite average flush volume of two reduced flushes and one full flush.

1.0.1.2 Flushometer-Valve Activated Toilets. All flushometer-valve activated toilets shall have a maximum flush volume of not more than 1.6 gallons per flush in accordance with ASME A112.19.2/CSA B45.1.

**1.0.2 Lavatory Faucets.** The maximum flow rate for lavatory faucets shall be 1.5 gallons per minute at 60 psi in accordance with ASME A112.18.1/CSAB125.1 and shall be listed to the EPA WaterSense High Efficiency Lavatory Faucet Specification.

**1.0.3 Showerheads.** The maximum flow rate for showerheads shall be 2.0 gallons per minute at 80 psi in accordance with ASME A112.18.1/CSA B125.1. The showerhead shall be supplied by an automatic compensating valve that complies with ASSE 1016 or ASME A112.18.1/CSA B125.1 and specifically designed for the flow rate of the showerhead being used.

### Section 1.0 COMMENTARY

The residential section of this ordinance applies to single family homes, townhomes and multifamily units (i.e. condos, apartments, etc.).

This section provides maximum water usage figures for various plumbing fixtures. The figures represent a 20%-50% reduction in water use above the fixture water use standards in the national Energy Policy Act of 1992 where applicable.

| Fixture     | EPA 1992 Standard | % Reduction with Ordinance |
|-------------|-------------------|----------------------------|
| Toilet      | 1.6 gpf           | 20%                        |
| Faucets     | 2.5 gpm           | 40%                        |
| Showerheads | 2.5 gpm           | 20%                        |

gpf=gallons per flush

gpm=gallons per minute

1.0.1 Toilets: Toilets typically account for 27% of total residential indoor water use and are often the single largest indoor user of water. High Efficiency Toilet (HET) replacement and utilization of dual flush

toilets can produce substantial water savings particularly in older communities. High Efficiency Toilets use 1.28 gallons per flush or less. Typically dual flush toilets provide 1.6gpf for the full flush and 1.1 gpf for the reduced flush yielding a composite average flush volume of 1.27 gpf so that they are classified as High Efficiency Toilets. Flushometer-valve Activated Toilets may not apply to residential development in all communities endorsed by the EPA WaterSense program for the reduced rate (< 1.6 gpf) for commercial or residential use. Local decisions should be made as to what is appropriate for a specific community. Water Savings: By replacing a 3.5 gpf toilet with a High Efficiency Toilet (HET) using 1.28 gpf or less, an average household can save about 32 gallons a day or 11, 700 gallons a year. Note: Savings represent a remodeled household replacing a 3.5 gpf toilet, generally installed before 1994. Typically 1.6 gpf toilets are not replaced with HETs as it is not cost-effective.

1.0.2 Faucets: Faucets typically account for 16% of total residential indoor use. Most residential faucets are not self closing or metered. Therefore it is important to use high efficiency faucets and educate residents on associated water saving practices. Water Savings: By replacing a 2.5 gallon per minute faucet with a 1.5 gallon per minute faucet, an average household can save about 23 gallons per day or 8,300 gallons per year. Note: Savings represent a remodeled household replacing a 1.5 gpm faucet, generally installed after 1994.

1.0.3 Showerheads: Showerheads typically account for 17% of total residential indoor use. Multiple showerheads per shower compartment are becoming more common in newer or more expensive housing. The number of showerheads not addressed in this model ordinance but local officials may wish to address it. Water Savings: By replacing a 3.0 gallon per minute showerhead with a 2.0 gallons showerhead, an average household can save about 15 gallons per day or 5,400 gallons a year. Note: Savings represent a rehabbed household replacing a 3.0 gpm showerhead, generally installed before 1994.

In Practice:

Austin, TX: <http://www.ci.austin.tx.us/watercon/downloads/WCTFPolicyDoc.pdf>

Los Angeles: [http://clkrep.lacity.org/onlinedocs/2009/09-0510\\_rpt\\_atty\\_4-30-09.pdf](http://clkrep.lacity.org/onlinedocs/2009/09-0510_rpt_atty_4-30-09.pdf)

Learn More:

EPA WaterSense Program-Product Information: <http://www.epa.gov/watersense/pp/index.htm>

**2.0 Appliances:** This section applies to all new and rehabbed construction.

**2.0.1 Dishwashers.** The maximum water factor for residential dishwashers shall be 5.8 and be EPA Energy Star rated.

**2.0.2 Clothes Washers.** Residential clothes washers shall comply with the EPA Energy Star program requirements and shall have a water factor of 5.0 or less.

## Section 2.0 COMMENTARY

2.0.1 Dishwashers: Dishwashers typically account for 1% of total residential indoor use. Although this amount is relatively small when compared to other fixtures, efficient dishwashers use less water and less energy due to decreased hot water use for cleaning cycles. The requirements for Energy Star appliances addresses both water and energy usage.

2.0.2 Clothes washers: Clothes washers typically account for 22% of total indoor use. As with dishwashers, clothes washers can use a significant amount of energy as well. The requirements for Energy Star appliances addresses both water and energy usage.

### In practice:

Los Angeles: [http://clkrep.lacity.org/onlinedocs/2009/09-0510\\_rpt\\_atty\\_4-30-09.pdf](http://clkrep.lacity.org/onlinedocs/2009/09-0510_rpt_atty_4-30-09.pdf)

### Learn More:

Energy Star: [http://www.energystar.gov/index.cfm?c=appliances.pr\\_appliances](http://www.energystar.gov/index.cfm?c=appliances.pr_appliances)

California Urban Water Conservation Council: <http://www.cuwcc.com/mou/bmp3-residential.aspx>

### **3.0 Residential Retrofits:**

**3.0.1 Retrofit on Resale.** All residential property owners, prior to change of ownership must certify that the structure has high efficiency plumbing fixtures (toilets, faucets, and showerheads) as defined in Section 1.0 Plumbing Fixtures in this ordinance. This applies to all residential property built prior to January 1, 1994.

**3.0.2 Retrofit on Purchase.** All residential property buyers within (X) days of change of ownership must certify that the structure has high efficiency plumbing fixtures (toilets, faucets, and showerheads) as defined in Section 1.0 Plumbing Fixtures in this ordinance. X=60-90 days. This applies to all residential property built prior to January 1, 1994.

**3.0.3 Retrofit on Reconnection.** All residential property buyers must attach appropriate verification that the structure has high efficiency plumbing fixture (toilets, faucets, and showerheads) as defined in Section 1.0 Plumbing Fixtures in this ordinance when applying for new water service. This applies to all residential property built prior to January 1, 1994.

## Section 3.0 COMMENTARY

A municipality may choose one of the following three options outlined in the section: Retrofit on Resale, Retrofit on Purchase, or Retrofit on Reconnection. This basic principle on residential retrofits is to accelerate fixture replacement using existing processes such as the purchase and sale of a home. The options vary by responsible party (buyer or seller) and time of enforcement (before the sale, after the purchase or before reconnect).

Although similar ordinances have been carried in several cities and counties in the United States, it is important to note that each ordinance is designed for the specific community and no two ordinances are the same in scope or structure. Applicability, exemptions, and enforcement techniques need to be locally assessed for successful adoption.

Applicability can include but is not limited to the type of fixtures chosen, type/age of housing, ordinance effective date, replacement fixture rates, unincorporated or incorporated land, etc.

In Illinois, the Energy Policy Act of 1992 was enforced on 01/01/1994. Therefore any home built after this date is exempt from this section as water efficient fixtures are already standard. Other sample exemptions include: historical buildings, transfers within family, extreme economic hardship, foreclosures, eminent domain, teardowns, etc.

Enforcement typically entails submission of a compliance form which can be included in Disclosure Forms. A sample form is in Appendix A. Penalties widely range but usually take form of increasing monetary fines with each violation. In some cases this section can also apply to commercial and industrial purchases with either the same or slightly modified conditions.

In practice:

Retrofit on Resale: Santa Cruz County, CA

[http://sccounty01.co.santa-cruz.ca.us/eh/Water\\_Resources/water\\_conservation.htm](http://sccounty01.co.santa-cruz.ca.us/eh/Water_Resources/water_conservation.htm)

Retrofit on Purchase: San Diego, CA

<http://docs.sandiego.gov/municode/MuniCodeChapter14/Ch14Art07Division04.pdf>

Retrofit on Reconnect: DeKalb County, GA

<http://fp.dekalbrealtors.com/Call%20To%20Action/RetrofitSubstituteOrd.pdf>

## **Residential Ordinance-Indoors Variances**

The Municipality may waive the requirements in Section 3.0 based on certain household characteristics such as extreme economic hardship, historical landmark designation, transfers within a family, foreclosures, eminent domain, teardowns, etc.

## **Residential Ordinance- Landscape**

### **4.0 Vegetation:**

**4.0.1 Turf Area and Location.** The combined size of turf (plus other high water use plants) or other water features shall be limited to no more than 25% of the total developed landscape area.

**4.0.2 Planting.** Residents are encouraged to use native plants and/or low water use plants.

### **Section 4.0 COMMENTARY**

#### 4.0.1 Turf Area Location

Developed Landscape Area refers to all outdoor areas under irrigation + water features. Hardscape areas are not included.

#### In Practice:

Marin Municipal Water District, CA: <http://www.marinwater.org/documents/O385.pdf>

#### 4.0.2 Planting

Municipalities may wish to publish a list of recommended plants to aid residents in planting schemes.

The Shedd Aquarium has a list of native plants found at

[http://sheddaquarium.org/greatlakes/files/native\\_plants\\_infosheets.pdf](http://sheddaquarium.org/greatlakes/files/native_plants_infosheets.pdf)

#### Learn More:

EPA, Green Landscaping, Green Acres, Native Plant Fact Sheets, Illinois Resources:

<http://www.epa.gov/greenacres/nativeplants/factsht.html#Native Plant>

**5.0 Irrigation:**

**5.0.1 Landscape Irrigation Equipment.** Any new system installed within the residential areas of the Municipality (for landscape areas > X acres) must be equipped with rain sensing devices and freeze gauges that shut off the systems and that are approved as to number and type by the Director of Public Works/Planning.

- Sprinkler heads must not spray into streets and sidewalks.
- Strips of land less than 6 feet in width shall be irrigated by drip, bubbler or micro irrigation systems.

Check valves must be installed at irrigation heads as needed to prevent low head drainage and puddling.

**5.0.2 Landscape Irrigation Days.** At even numbered addresses, landscape irrigation may occur only on Wednesday and Saturday. Odd numbered addresses may irrigate only on Thursday and Sunday.

**5.0.3 Landscape Irrigation Schedules.** Between the months of April through October, landscape irrigation shall not occur between 10:00 AM and 6:00 PM. Irrigation shall not continue beyond 2 hour per irrigation day nor more than  $\frac{3}{4}$  inch during the allocated schedule.

**5.0.4 Irrigation Permits:** Residents may receive permits for the irrigation of new landscape to allow watering at any time of day on any day for the initial 30 days and every other day for the next 30 days for a total of one 60-day period.

**Section 5.0 COMMENTARY**

5.0.1 Landscape Irrigation Equipment: This requirement can be met if the local unit of government requires permits for the installation of automatic irrigation systems. The Municipality can either decide on the threshold for requiring permits based on size of proposed development and of landscape areas or insert this section within the Landscape Ordinance, where available. The Municipality may add additional requirements as it sees fit to prevent overspray and to insure that spray heads do not have overlapping spray.

5.0.2 Landscape Irrigation Days: Due to the amount of rain that falls in this region, irrigating landscapes bi-weekly should be sufficient for healthy lawns. (will refer to relevant research)  
Municipalities that already enact a Sprinkling Ordinance may choose to modify their ordinances accordingly.

5.0.3 Landscape Irrigation Schedules: See Irrigation Permits and Variances for other allowances.

5.0.4 Irrigation Permits: The permitting system provides relief for residents who wish to install new landscape that might require additional watering during the first stages of growth.

**6.0 Point-Of-Use Reverse Osmosis Water Treatment Systems:** Reverse Osmosis Water Treatment Systems installed in residential occupancies shall be equipped with automatic shutoff valves to prevent water wasting whenever there is no call for producing treated water.

**Section 6.0 COMMENTARY**

More to be added....

**7.0 Homebuilders:** Homebuilders are required to offer a low water consuming landscape option in any landscape options offered to homebuyers.

**Section 7.0 COMMENTARY**

More to be added....

**8.0 Homeowner Associations:** HOA must not require water intensive landscaping in their rules/regulations.

**Section 8.0 COMMENTARY**

More to be added....

### **Residential Ordinance- Landscape Variances**

- The Municipality may waive the above requirements if presented with compelling evidence that the site is not suitable for the recommended plantings.
- The requirement for turf and pool, as well as high water use plants, does not apply where the developed landscape areas are less than 1,000 square feet. In areas where irrigation is done from recycled water- rainwater, the combined size of the turf areas and swimming pools/water features shall be limited to no more than 40%.
- Irrigation using a micro-spray, micro-jet, drip, bubbler system, hand-held hose equipped with an automatic shut-off nozzle is allowed anytime and on any day.
- The use of water for irrigation from a recycled water system is allowed with no constraints on irrigation schedules. Recycled system components shall be identified as non-potable water sources.
- The use of discharge water from a water-to-air air-conditioning unit or other water-dependent cooling system is not limited under the requirements of this ordinance.

## Commercial/Industrial Ordinance-Indoors

**9.0 Plumbing Fixtures:** Plumbing fixtures in all new and remodeled construction shall not exceed the following flow rates and must be a labeled WaterSense fixture. The following flow rates shall at a minimum maintain alignment with the most current EPA WaterSense product specification standards for all fixtures listed below.

**9.0.1 Toilets.** No water closet shall have a flush volume greater than 1.6 gallons per flush.

**1.0.1.1 Gravity, Pressure Assist and Electro-Hydraulic Tank-type Toilets.** All gravity, pressure assist and electro-hydraulic tank type toilets in light commercial locations shall have a maximum effective flush volume of not more than 1.28 gallons of water per flush in accordance with ASME A112.19.2/CSA B45.1 or ASME A112.19.14 and shall be listed to the EPA WaterSense Tank-Type High Efficiency Toilet Specification. Note: The effective flush volume for dual flush toilets is defined as the composite average flush volume of two reduced flushes and one full flush.

**1.0.1.2 Flushometer-Valve Activated Toilets.** All flushometer-valve activated water closets shall have a maximum flush volume of not more than 1.6 gallons per flush in accordance with ASME A112.19.2/CSA B45.1.

**9.0.2 Urinals.** Urinals shall have a maximum flush volume of not more than 0.5 gallon of water per flush in accordance with ASME A112.19.2/CSA B45.1 or IAPMO Z124.9

**9.0.3 Public or Public Use Lavatory Faucets.** Lavatory faucets installed in bathrooms of buildings or occupancies other than residences and apartments must be self closing or metering faucets and comply with the flow rates below. Private bathrooms in hotels are an exception and shall have a maximum flow rate of 1.5 gallons per minutes at 60 psi in accordance with ASME A112.18.1/CSA B125.1 and shall be listed to the EPA WaterSense High-Efficiency Lavatory Faucet Specification.

**Self Closing Faucets.** The maximum flow rate shall be 0.5 gallon per minute at 60 psi in accordance with ASME A112.18.1/CSA B125.1.

**Metering Faucets.** Metering faucets shall deliver not more than 0.25 gallons of water per cycle.

**9.0.4 Showerheads.** The maximum flow rate for showerheads shall be 2.0 gallons per minute at 80 psi in accordance with ASME A112.18.1/CSA B125.1. The showerhead shall be supplied by an automatic compensating valve that complies with ASSE 1016 or ASME A112.18.1/CSA B125.1 and specifically designed for the flow rate of the showerhead being used. This does not apply to emergency safety showers and emergency eye wash stations.

**9.0.5 Commercial Pre-rinse Spray Valves.** The maximum flow rate for a pre-rinse spray valve installed in a commercial kitchen to remove food waste from cookware and dishes prior to cleaning shall be 1.6 gallons per minute at 60 psi. Where pre-rinse spray valves with maximum flow rates of 1.3 gallons or less are installed, the minimum static pressure shall be 30 psi. Commercial kitchen pre-rinse spray valves shall be equipped with an integral automatic shut off.

## Section 9.0 COMMENTARY

This section provides maximum water usage figures for various plumbing fixtures. The water usage figures represent a 20%-50% reduction in water use above the fixture water use standards in the national Energy Policy Act of 1992 where applicable.

| Fixture     | EPAAct 1992 Standard | % Reduction with Ordinance |
|-------------|----------------------|----------------------------|
| Toilet      | 1.6 gpf              | 20%                        |
| Faucets     | 2.5 gpm              | 40%                        |
| Showerheads | 2.5 gpm              | 20%                        |

gpf=gallons per flush

gpm-gallons per minute

Improving commercial plumbing fixtures can save water in addition to potentially reducing the long-term operating costs for businesses.

**1.0.1 Toilets:** Currently the EPA does not have specifications for commercial flushometer-valve toilets most often found in higher public traffic locations such as airports, theaters, arenas, schools. However the EPA does include light commercial locations such as hotels and restaurants in their tank type High-efficiency Toilet Specification. A more extensive definition for light commercial may be developed by the Municipality as needed.

**1.0.2 Urinals:** Waterless urinals were not included in this model ordinance but may be in the future as education and technology advance.

**1.0.3 Public or Public Use Lavatory Faucets:** Flow rates can be achieved by fixture replacement or retrofit (i.e. aerators, etc). Private bathrooms in hotels are generally used similar to private residential bathrooms and therefore are held to the same standard as outlined in Residential Indoor Section 1.0.2.

**1.0.4 Showerheads:** This applies to but is not limited to hotels and motels.

**1.0.5 Commercial Pre-rinse Spray Valves:** The EPA WaterSense program is currently developing performance specification for High-Efficiency Pre-rinse Spray Valves. The EPA estimates that replacing an outdated pre-rinse spray valve with a more efficient valve can save between 6,400 to 20,000 gallons per pre-rinse spray valve per year.

### Water Savings:

Water Savings from ordinances for commercial and industrial accounts will be heavily dependent on specific facility characteristics. Water savings can be substantial, especially in more water-intensive businesses such as restaurants and hotels. Toilet and faucet water savings can be expected to exceed residential savings (Residential-Indoor Commentary section 1.0.1 and 1.0.2) assuming increased use per fixture. Showerheads, assumed to mainly be used in hotels, may have similar water savings as the residential showerhead water savings documented in Residential-Indoor Commentary section 1.0.3.

[In Practice:](#)

[Learn More:](#)

**10.0 Appliances:** Applies to all new and rehabbed construction.

**2.0.1 Dishwashers.** The maximum water factor for commercial dishwashers shall comply with the EPA Energy Star Program requirements.

**2.0.2 Clothes Washers.** Clothes washers installed in public use applications shall have a Water Factor of 8.0(or less).

## Section 10.0 COMMENTARY

In Practice: Need to find example.

**11.0 Commercial Carwash Facilities:** All new commercial car-wash facilities shall be equipped with an approved water recycling system on both the wash and rinse water units. All existing commercial car-wash facilities shall be equipped with such recycling systems when the systems are replaced.

## Section 11.0 COMMENTARY

Commercial car-wash facilities have high water use requirements. Recycling systems in these facilities are feasible, and many newer installations are equipped in this way in their original design. This is already a requirement of the Illinois Division of Water Resources in connection with Lake Michigan water allocation permits.

In Practice: Need to find example.

**12.0 Eating and Drinking Establishments:** Drinking water shall be served only upon request in public and private eating and drinking establishments including but not limited to restaurants, hotels, cafes, cafeterias, bars, or other public places where food or drink is served and/or purchased. Establishments shall clearly communicate this to customers through table tents, a note listed on the menu or clearly visible signage.

## Section 12.0 COMMENTARY

The purpose of this section to limit water waste in food-serving establishments.

In Practice:

Claremont, California. <http://www.ci.claremont.ca.us/download.cfm?ID=26446>

Las Vegas, NM. <http://www.lasvegasnm.gov/Water%20Conservation%20Ordinance%2001-14.pdf>

Santa Fe, NM. <http://www.santafenm.gov/index.aspx?NID=1295>

**13.0 Ice Makers:** Ice makers shall be air cooled and shall comply with the US EPA Energy Star for Commercial Ice Machines.

### Section 13.0 COMMENTARY

In Practice: Need to find example.

**14.0 Commercial Retrofits:** Reference Residential Retrofits in Residential Indoor Section 3.0.

### Section 14.0 COMMENTARY

The Residential Retrofit section can be applied to commercial and industrial purchases with either the same or modified conditions.

In Practice:

All of the examples outlined in the Residential Retrofits Section 3.0 include either commercial property or commercial and industrial property as well.

## **Commercial/Industrial Ordinance- Landscape**

### **15.0 Vegetation:**

**15.0.1 Soil Depth.** Areas planted with turf grass shall have a minimum of 6 inches of soil depth. The soil shall be blended with compost in 27/25% ratio of soil to compost which shall be incorporated in the top 2 inches of the native soil.

**15.0.2 Planting:** All new commercial development with proposed landscaped areas greater than X square feet shall use native and/or non water intensive planting. Turf planting and high water use plants shall not exceed 20% of the landscaped area. (need more research to find optimum number-%-). Strips of land less than 15 feet in width and planting beds shall be irrigated by low flow or spray irrigation using low angle spray nozzles.

### **Section 15.0 COMMENTARY**

15.0.1 Soil Depth: Compost refers to decaying organic matter, such as leaves or grass clippings, used to improve soil structure.

In Practice: The City of Leander, TX has a similar soil depth requirement.

Learn More: <http://www.leandertx.org/pdfs/WaterConservationOrdinance03.15.2007.pdf>

15.0.2 Planting: The Municipality may consider a more detailed classification of commercial uses and the maximum allowed percentage of turf planting. The Municipality may choose to publish an approved plant list to guide businesses in their choice of planting.

In Practice: The City of Leander, TX amended its Landscape Ordinance in March 2007 to include water conservation measures that described landscape requirements

Learn More: <http://www.leandertx.org/pdfs/WaterConservationOrdinance03.15.2007.pdf>

### **16.0 Irrigation:**

**16.0.1 Landscape Irrigation Days:** At commercial accounts, landscape irrigation may occur only on Tuesdays and Fridays.

**16.0.2 Landscape Irrigation Equipment.** See section 5.0.1 in Residential-Outdoor. In addition, and for commercial/industrial accounts, applicants are required to submit a water use plan that addresses the measures taken to minimize evaporation loss of water from landscaped areas, utilization of low water using plants and use of non-potable water for irrigation.

## Section 16.0 COMMENTARY

16.0.1 Landscape Irrigation Days:

In Practice:

Learn More:

16.0.2 Landscape Irrigation Equipment: The Municipality shall decide on what size development shall require the permits.

**17.0 Water Budgets:** The Municipality shall require dedicated landscape accounts to devise maximum annual water allotments that their facilities require. This water budget will be calculated as follows:

1. Multiply total acres of turfed area by 4.9 feet
2. Multiply total acres of newly turfed area by 1.0 feet
3. Multiply total acres of water surface by 6.2 feet
4. Multiply total acres of low water use landscape area by 1.5 feet

The sum of the above shall be the annual water budget for the facility. Dedicated landscape accounts will pay an agreed rate for their water budget and a higher rate for more water usage.

## Section 17.0 COMMENTARY

Water budgets can be calculated by various methods and the local unit of government may wish to use the method that is most suitable to its purposes.

In Practice:

The City of Phoenix uses this method to calculate water allotments/budgets. There is a separate budget for golf courses and municipalities may wish to implement a similar approach.

Learn More:

Article IX, Water Conservation Code, City of Phoenix, AZ

<http://www.municode.com/resources/gateway.asp?pid=13485&sid=3>

**18.0 Reporting:** Dedicated landscape accounts shall provide a report on an annual basis to the Municipality on facility water conservation practices. Such report will provide a detailed description of water conservation technologies, irrigation schedules and their connection to weather and soil conditions, plant type and topography.

**Section 18.0 COMMENTARY**

The local unit of government may wish to provide a questionnaire or a survey to the above mentioned accounts for ease of reporting. This requirement maybe added to existing ordinances, e.g. Landscape Ordinances, as part of permit requirements and approvals.

In Practice:

**Commercial/Industrial Ordinance - Landscape  
Variances**

- Accounts that demonstrate their ability to provide 50% of their irrigation from recycled water via rainharvesting, e.g. rain barrels or cisterns, are waived from the water budget requirement.
- Areas with existing native vegetation that remain undisturbed, areas around the trunk of existing trees, shrub beds and wildscapes shall be exempt from the soil depth requirement.
- Detention and water quality ponds may not be counted towards the above landscape area requirements.

## **Water Waste**

Water Waste is defined by but not limited to sections 19.0-24.0 found in the Water Waste Section of this model ordinance. Water Waste is the general misuse or inefficient use of potable water.

### **19.0 Public Use:**

**19.0.1 Drinking fountains.** Drinking fountains in new or renovated construction shall be self-closing.

**19.0.2 Hydrants.** Unauthorized use of hydrants is prohibited. Authorization must be obtained from the city water department or utility.

### **Section 19.0 COMMENTARY**

19.0.1 Drinking Fountains:

In Practice: Need to find example

19.0.2 Hydrants

In Practice: Need to find example

### **20.0 Private Use:**

**20.0.1 Leakages.** Leaks for private water lines must be fixed within X days of notification by water utility/or discovery of the leak. X=5-30 days.

**20.0.2 Water Softeners.** Actuation of regeneration of all water softeners shall be by demand initiation as opposed to a timer-based system.

**20.0.3 Car Washing.** Vehicles must be washed with a hose that has an automatic shut-off valve.

### **Section 20.0 COMMENTARY**

20.0.1 Leakages

In Practice:

Need to find example

20.0.2 Water Softeners: This ordinance section is applicable to communities where well water is the water source, and household water softening units are needed or in use.

In Practice: Need to find example

20.0.3 Car Washing: This prevents excessive run-off that tends to flow over impervious areas, e.g. streets and sidewalks.

**21.0 Water Meters:** The Municipality shall require that all new water services be metered.

### **Section 21.0 COMMENTARY**

This ordinance section is appropriate for adoption in communities where universal metering is not already being practiced.

#### **22.0 Impervious Areas:**

**6.0.1 Impervious Watering.** No person shall knowingly permit the irrigation of a landscape on premises owned, leased, or managed by the person in a manner that causes a substantial amount of water to fall upon impervious areas (sidewalks, driveways, streets, gutters or ditches).

**6.0.2 Impervious Washing.** No person shall wash impervious areas (sidewalks, driveways, streets, etc.) with water except in emergencies to remove spills of hazardous materials or eliminate dangerous conditions.

### **Section 22.0 COMMENTARY**

In Practice: Need to find example

**23.0 Installation:** Water-conserving fixtures (and fixture fittings) shall be installed in strict accordance with the manufacturers' instructions to maintain their rated performance.

### **Section 23.0 COMMENTARY**

Some municipalities may require a licensed plumber or technician to install fixtures. This section may need to be modified to include local rules and regulations.

**24.0 Decorative Water Features:** All decorative water features (i.e. fountains, etc) shall recirculate water within the device.

### **Section 24.0 COMMENTARY**

In Practice:

Denver, Colorado. <http://www.denverwater.org/OperatingRules/OperRules14/>

## Pricing

**25.0 Pricing:** The Municipality shall implement conservation pricing structures and economic incentives that encourage desirable water management practices. This is best achieved in the presence of timely billing based on metered usage. See Appendix X for a sample bill. (not included at this time)

### **Section 25.0 COMMENTARY**

Conservation pricing structures include seasonal rates (higher per unit water rate during the peak usage summer months), uniform rates or increasing block rates in which the unit price of water increases as the quantity of water used increases. The Municipality may choose to adopt the pricing structure most suitable to their situation.

#### **In Practice:**

Under conditions of Resolution 92-2, the Delaware River Basin Commission encourages purveyors or owners of public water supply systems to evaluate the feasibility of implementing water conservation pricing structures.

## Outreach and Education

### 26.0 Water Conservation Signage:

**26.0.1 Public, Semi-Public and Government Restroom and Shower facilities.** These facilities shall post no less than one water conservation sign in each restroom and shower facility. Each sign shall not be less than 8.5 by 11 inches in size and may either be a municipal-provided sign or a sign developed using municipal-provided text. Either format must cite this ordinance. Signage must be posted in a visible location within the facility.

**26.0.2 Hotels, Motels and other Lodging Facilities.** These facilities shall display a minimum of one a water conservation informational card or brochure in a visible location per guest room. Card or brochure may be municipal-provided or developed using municipal-provided text.

### **Section 26.0 COMMENTARY**

In practice:

Santa Fe, NM

<http://www.santafenm.gov/index.aspx?NID=1295>

### 27.0 Water Conservation Literature Distribution:

**27.0.1 Retail Plant Nurseries.** Retail plant nurseries shall provide customers who purchased outdoor plants with municipal-provided low water use landscape literature at the time of sale. Labeling of low water use plants is also encouraged.

**27.0.2 Landscape Contractors and Architects.** Landscape contractors and architects shall provide prospective clients with municipal-provided low water use landscape literature and water efficient irrigation guidelines before presenting a service contract. Literature shall include but not limited to information on rain sensors, freeze gauges and cisterns.

**27.0.3 Realtors, Attorneys, Banks and Other Closing Real Estate Transactions.** These individuals or entities shall provide the purchasing party of a home, business or property with municipal-provided indoor and outdoor water conservation literature at the time of closing.

**27.0.4 Municipal Departments.** The municipality shall provide relevant indoor and outdoor water conservation literature to: 1) all persons applying for a building permit 2) all customers initiating new water service from a municipal-operated water utility.

## Section 27.0 COMMENTARY

In practice:

Las Vegas, NM

Current: <http://www.lasvegasnm.gov/Water%20Conservation%20Ordinance%2001-14.pdf>

Proposed update:

[http://www.lasvegasnm.gov/Water%20Conservation%20Ordinance%20Suggested%20Changes%20\\_3\\_.pdf](http://www.lasvegasnm.gov/Water%20Conservation%20Ordinance%20Suggested%20Changes%20_3_.pdf)

**28.0 Education:** The municipal department responsible for water supply and treatment shall make available educational materials that aim to increase awareness of the value of water and promote water efficiency measures. The department shall also inform the public and maintain a public education

## Section 28.0 COMMENTARY

In practice:

Las Vegas, NM

Current: <http://www.lasvegasnm.gov/Water%20Conservation%20Ordinance%2001-14.pdf>

Proposed update:

[http://www.lasvegasnm.gov/Water%20Conservation%20Ordinance%20Suggested%20Changes%20\\_3\\_.pdf](http://www.lasvegasnm.gov/Water%20Conservation%20Ordinance%20Suggested%20Changes%20_3_.pdf)

## **Violations/Enforcement**

**29.0 Violations/Enforcement:** For a first violation by any resident of the requirements of this ordinance, the Department/Municipality shall issue a written notice. For a second violation within the preceding twelve (12) calendar months, a surcharge in the amount of \$125 shall be added to the customer's water bill. Each subsequent offense shall have a fine of \$500. After a fifth or subsequent violation, the Department/Municipality may restrict water service to the customer following a hearing held by Department/Municipality where the customer has an opportunity to respond to Department/Municipality information. Full service may be restored no later than 48 hours after implementation of the action resulting in termination and payment of all charges.

### **Section 29.0 COMMENTARY**

Municipalities may choose the penalty structure most suitable for their situations.

Notice: the issued written notice must be posted at a conspicuous place on customer's premises or by US mail, first class, postage prepaid addressed to customer's billing address

Payment: customers can pay for violations within their water bill payments.

Dispute: customers may dispute any penalty levied pursuant to this section within (15-30 days) of issuance to the Department/Municipality or to a designated hearing officer.

Service restriction: .... (water required by customer to maintain an adequate level of public health and safety) more to be added

In Practice:

Sugar Grove, IL. [http://www.sterlingcodifiers.com/codebook/index.php?book\\_id=606](http://www.sterlingcodifiers.com/codebook/index.php?book_id=606)

**Glossary of Terms**

Commercial:

Dedicated Landscape Accounts:

Developed Landscape Area:

Energy Star:

Residential:

Water Factor:

WaterSense:

Rehabbed/Renovated:

**Acronyms**

ASME:

ASSE:

CSA:

EPA:

GPD:

GPF:

GPM:

PSI: